

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 08/03/01
Date Received: 07/12/01
Project: X-Ray Coolant, PO# M66427
Date Extracted: 07/12/01 and 07/16/01
Date Analyzed: 07/12/01 and 07/16/01

**RESULTS FROM THE ANALYSIS OF THE PRODUCT SAMPLE
FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL
USING METHOD NWTPH-Dx
Extended to Include Motor Oil Range Compounds
Results Reported as µg/g (ppm)**

<u>Sample ID</u> Laboratory ID	<u>Diesel Extended</u> (C ₁₀ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 50-150)
M66427 d 107017-01	500,000	ip
00786 Soluble Oil D d	920,000	ip
Method Blank	<50	90

d - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

August 3, 2001

DUPLICATE COPY

INVOICE #01ACU0803-1

Accounts Payable
Alaskan Copper Works
628 South Hanford St.
Seattle, WA 98134

RE: Project X-Ray Coolant, PO# M66427 - Results of testing requested by Gerald
A. Thompson for material submitted on July 6, 2001.

2 samples analyzed by GC/FID @ \$90 per sample	\$ 180.00
3.75 hours by a Chemist for material evaluation and data review @ \$70 per hour	<u>262.50</u>
Amount Due	\$ 442.50

FEDERAL TAX ID #(b) (6)

107017

SAMPLE CHAIN OF CUSTODY

KT
Chen 7.6.01 BI2

Send Report To GERARD A. Thompson
 Company Alaskan Copper works
 Address 628 S. Harvard St
 City, State, ZIP Seattle WA 98134
 Phone # 206-382-8379 Fax # 206-382-4309

SAMPLERS (signature) <u>[Signature]</u>	
PROJECT NAME/NO. <u>X-RAY Contact</u>	PO # <u>m66427</u>
REMARKS <u>CALL Gerard About TEST to be Done First</u>	

Page # _____ of _____
TURNAROUND TIME <input type="checkbox"/> Standard (2 Weeks) <input type="checkbox"/> RUSH _____ Rush charges authorized by: _____
SAMPLE DISPOSAL <input type="checkbox"/> Dispose after 30 days <input type="checkbox"/> Return samples <input type="checkbox"/> Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED										Notes		
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	% of methanol	% of H ₂ O	other				
m 66427	01	7/6/01	10:30	methanol	1								✓	✓	✓			

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	<u>GERARD A. Thompson</u>	<u>ACW</u>	<u>7/6/01</u>	<u>11:05</u>
Received by: <u>[Signature]</u>	<u>S. Osborn</u>	<u>F&B, Inc.</u>	<u>7/6/01</u>	<u>12N</u>
Relinquished by:				
Received by:				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

August 3, 2001

Gerald A. Thompson, Project Manager
Alaskan Copper Works
628 South Hanford St.
Seattle, WA 98134


Dear Mr. Thompson:

Included are the results from the testing of material submitted on July 6, 2001 from your X-Ray Coolant, PO# M66427 project. The sample M66427 is composed of two distinct layers (top and bottom). Based on results of the GC/FID analysis, the majority of the top layer appears to be a high boiling product which is consistent with the D-Oil standard provided.

Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible. We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.


Kurt Johnson
Chemist

Enclosures
ACU0803R.DOC